

3.0 RESEARCH DESIGN AND METHODS

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3.1 Research Design

The purpose of the Phase IB investigation of the SR 1 Little Heaven Grade Separated Intersection project was to identify archaeological resources in the project APE (Emory 2005). More specifically, the goals of this study were to identify archaeological-bearing deposits, determine the integrity of those deposits, and discover the range of historic and prehistoric activities that occurred within the APE.

3.2 Methods

In 2004, the project archaeological APE was divided into six study parcels. The seventh parcel, Parcel 7, was added to the APE in 2007. The Phase IA Archaeological Assessment previously assigned a level of prehistoric and historic archaeological potential to each parcel (except for Parcel 7), based on environmental factors and known historic and prehistoric resources (Emory and Weinberg 2005). Some parcels produced more than one level of archaeological resource potential. As a result, individual areas were delineated within specific parcels based on these varying levels of potential. An exception, however, is Parcel 6, which was divided into seven areas (6-0 to 6-6); these were divided according to property owner. Archaeological resource potentials for the properties comprising Areas 6-1 to 6-6 were re-assessed in 2007 after DelDOT secured permission to enter the properties (Table 1). Study of Area 6-0 was completed in October 2004, and therefore its potential was not re-assessed.

Table 1. Archaeological Resource Potentials for Parcels 6 and 7.

Parcel Designation	Area	APE Area in Hectares (Acres)	Archaeological Resource Potential*	
			Prehistoric	Historic
6	6-0	0.24 (0.59)	H	H
	6-1	0.6 (0.14)	M	H
	6-2	0.12 (0.29)	L	H
	6-3	0.28 (0.69)	L	H
	6-4	0.24 (0.60)	L	H
	6-5	0.13 (0.32)	L	H
	6-6	0.09 (0.22)	L	H
7	N/A	2.01 (4.94)	H	L
Total		3.15 (7.79)		

*Test Intervals: (L) Low – 30.5 meters, (M) Medium – 22.9 meters, (H) High – 15.2 meters

3.2.1 Parcel 6

Parcel 6 is a 1.15-hectare (2.85-acre) area that is located at the northern limits of the project APE between Skeeter Neck Road and Mulberrie Point Road (Figure 2). The property is predominantly residential and covered in mown lawn, with the exception of a small portion of wetlands associated with a small stream. The land within Parcel 6 has experienced recent development; most houses are less than two years in age.

The entirety (Areas 6-0 to 6-6) of Parcel 6 was not tested during the Phase IB Archaeological Survey in October 2004 because access was denied by the landowners. After permission to enter the Parcel 6 properties was obtained, A.D. Marble & Company personnel completed the archaeological study of the remaining six areas (Areas 6-1 to 6-6) within the parcel in October 2007. They implemented a high-probability (15.2-meter interval) systematic STP strategy in areas that were assessed as relatively intact (Areas 6-1, 6-2, 6-4, and 6-6). The crew implemented a low-probability (30.5-meter interval) sampling strategy in areas that they assessed as unlikely to be intact (Areas 6-3 and 6-5). Their evaluations of subsurface integrity relied on visible characteristics of the surface of each area and evidence of mechanically disturbed topography. STPs were excavated, when possible, into culturally sterile deposits. Excavated sediments were sifted through 0.64-centimeter wire mesh, and excavation data were recorded on standardized field forms. With the exception of modern trash, which was noted and discarded in the field, artifacts recovered from the STPs were retained for processing and analysis.

3.2.2 Parcel 7

Parcel 7 is a 2-hectare (4.94-acre) area that is located primarily in an agricultural field between SR 1 and Clapham Road. Based on cursory reviews of historic atlases (Byles 1859; Beers 1868) (Figures 3 and 4) and a USGS topographic map (1993), it was determined that the parcel contained low to moderate potential for encountering historic resources, but moderate to high potential for encountering prehistoric resources (Figure 2). Parcel 7 was not included in the initial project planning documents (Emory 2005).

The field was plowed and disked, underwent a washing rain (on December 26, 2007), and was subjected to a pedestrian survey in early January 2008. A.D. Marble & Company archaeologists

examined the field in 1.9-meter transects and flagged all visible artifacts. When the pedestrian survey was completed, it was obvious that the field contained a dense concentration of historic artifacts in the western portion of the parcel, southwest of the wooded area, adjacent to the east of Clapham Road, and north of the Mt. Olive School. Artifacts in this cluster were treated separately from those outside the cluster. The locations of artifacts outside the cluster were recorded individually using a handheld Global Positioning System (GPS) unit. The boundary of the historic artifact concentration and temporally diagnostic artifacts inside the concentration were then recorded. Those diagnostic materials were also bagged individually. The locations of non-temporally diagnostic artifacts within the historic artifact cluster boundary were not individually recorded. Instead, they were collected and placed, in aggregate, in a separate bag.

At the time these materials were collected, it was striking to find that the bulk of materials were bottle glass and ceramic sherds dating to the very late nineteenth and early twentieth centuries. It was curious that trace amounts of brick but no nails or metal were present. Based on this preliminary examination and the lack of architectural materials, it seemed most plausible that the historic artifact cluster was related to the practice of field manuring (DESHPO 2001:19-20). All artifacts were then transported to the A.D. Marble & Company archaeology lab facility in Conshohocken, Pennsylvania, for processing and analyses. The artifacts recovered during this final stage of the Phase IB study were washed, cataloged, and prepared for curation, according to the most current standards of the DESHPO.

Various sources were consulted for identifying the historic materials; these included published works by Noël Hume (1969, 2001), Jones et al. (1989), Miller (1980), and South (1977). Artifact catalogs and distribution maps were generated for analyses geared toward the presentation of results from this final session of the investigation. Works by Custer (1989) and Fogelman (1988) were consulted to identify the ceramic sherd recovered from Area 6-5 and the hafted biface recovered from Parcel 7.